

DETAILED ACTION

Response to Amendment

Applicants have brought to the Examiner's attention that there was an error in the Office action mailed on 6 March 2008 due to the previous Office action having been indicated to be both a Non-Final Rejection and a Final Rejection. Review of the file reveals that the previous action should have been indicated as a Non-Final Rejection.

Applicants in their remarks filed on 7/7/2008 refer to a telephone conversation July 3, 2008 wherein the Examiner pointed out that the previous Office action was a final action. However, it was later determined that this cursory review was incorrect and that the previous Office action should have stated to be a Non-Final Rejection.

Accordingly, Applicant's Amendment filed on 6/6/2008 has been entered and an action on the merits follows below.

Claims 1-18 are pending.

Claims 2-9 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species; there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

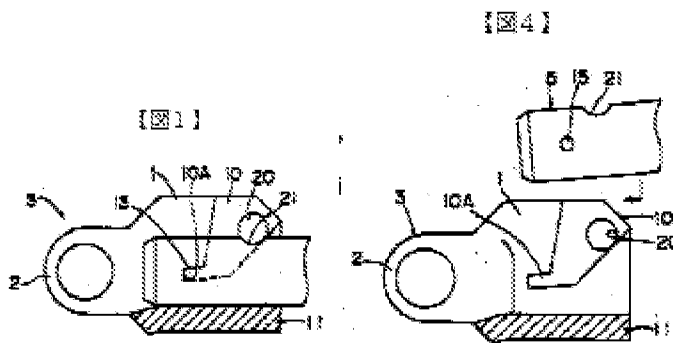
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10-13 and 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamikawa et al (JP2000297823).

With respect to claim 1, Kamikawa et al. disclose a yoke-and-shaft coupling structure (Figs. 1, 4) comprising a yoke (3) including a shaft coupling portion which has a U-shaped end face (11) and a shaft (5) to be inserted into the inside of the shaft coupling portion through a U-shaped opening portion. The shaft coupling portion includes a recessed portion (10) that extends perpendicular to the axial direction for positioning the shaft in both axial directions (the front wall and inclined rear wall providing limits to axial movement) and the shaft includes a salient portion (13 and 15) to be inserted into the recessed portion when the shaft is inserted into the inside of the shaft coupling portion.



With respect to claim 10, Kamikawa et al. disclose a yoke-and-shaft coupling structure (Figs. 1, 4) comprising a yoke (3) including a shaft coupling portion which has a U-shaped end face (11) and a shaft (5) having a longitudinal axis that is insertable into the U-shaped end portion of the yoke (3) in a direction perpendicular to the shaft axis. The shaft coupling portion includes a recessed slot (10) for positioning the shaft in both directions along the axis of the shaft with the recessed slot having first and second spaced walls. The shaft (5) includes a salient portion (13, 15) insertable into the recessed slot (10). The salient portion (13 and 15) in the recessed slot (10) limits relative axial movement between the yoke (3) and all parts of the shaft (5) in the U-shaped end portion of the yoke (3), prevents the shaft (5) from being removed from the yoke (3) by an axial force and allows the shaft (5) to be removed from the yoke (3) by a force perpendicular to the axis of the shaft (5).

With respect to claim 11, Kamikawa et al. disclose a yoke-and-shaft coupling structure (Figs. 1, 4) comprising a yoke (3) including a shaft coupling portion which has a U-shaped end face and a shaft (5) having a longitudinal axis, a first part of the

shaft (5) being positioned in the shaft coupling portion and a second part of the shaft projecting from the yoke (3) through the U-shaped end face (11). The shaft coupling portion includes a planar wall having a recessed slot (10) recessed in said planar wall for positioning the shaft (5) in both directions along the axis of the shaft (5). Further, the shaft (5) includes a salient portion (13 and 15) insertable into the recessed slot (10), the salient portion (13, 15) cooperating with the recessed slot (10) to both limit axial movement of the shaft (5) into the yoke (3) and to prevent the shaft from being removed from the yoke (3) by an axial force.

With respect to claim 12, Kamikawa et al. disclose that the shaft (5) is shiftable between first and second spaced positions relative to the yoke. Note that the “first” position would be as illustrated by Fig. 1 while the “second” position would be when the salient portion (13, 15) is located at the position at the juncture with the slanted end wall.

With respect to claim 13, Kamikawa et al. disclose (Figs. 1, 4) that the recessed portion includes a centerline that is perpendicular to the axial direction.

With respect to claim 15, Kamikawa et al disclose (Figs. 1, 4) that the slot (16) is perpendicular to the axis of the shaft when the shaft is mounted in the yoke (3).

With respect to claim 16, Kamikawa et al. disclose (Figs. 1, 4) that the salient portion (13, 15) cooperating with the recessed slot (10) is capable of permitting the shaft (5) to be removed from the yoke (3) by a force perpendicular to the axis of the shaft (5).

With respect to claim 17, Kamikawa et al. disclose (Figs. 1, 4) that the shaft coupling portion includes a planar wall and said recessed portion (10) is recessed in said planar wall.

With respect to claim 18, Kamikawa et al. disclose (Figs. 1, 4) that the recessed portion (10) comprises a slot in said planar wall.

Claims 1, 10-13 and 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamikawa et al (JP2000320562).

With respect to claim 1, Kamikawa et al disclose a yoke-and-shaft coupling structure (Figs. 1, 4) comprising a yoke (6) including a shaft coupling portion which has a U-shaped end face (16-18) and a shaft (1) to be inserted into the inside of the shaft coupling portion through a U-shaped opening portion. The shaft coupling portion includes a fixed projecting portion

(23,25) for positioning the shaft in both axial directions (the front wall and rear wall providing limits to axial movement) and the shaft includes a groove portion (2) to which the projecting portion is to be inserted when the shaft is inserted into the inside of the shaft coupling portion. With respect to the term “fixed”, it should be noted that the projecting portion (23, 25) is fixed in the axial direction and thus meets the broad recitation of “fixed” in the claim.

With respect to claim 10, Kamikawa et al disclose a yoke-and-shaft coupling structure (Figs. 1, 4) comprising a yoke (6) including a shaft coupling portion which has a U-shaped end face (16-18) and a shaft (1) to be inserted into the inside of the shaft coupling portion through a U-shaped opening portion in a direction perpendicular to the shaft axis. The shaft coupling portion includes a fixed projecting portion (23,25) for positioning the shaft in both axial directions (the front wall and rear wall providing limits to axial movement) and allows the shaft to be removed from the yoke by a perpendicular force (once the projecting portion has been backed out of the groove portion) and the shaft includes a groove portion (2) to which the projecting portion is to be inserted when the shaft is inserted into the inside of the shaft coupling portion. With respect to the term “fixed”, it should be noted that the projecting portion (23, 25) is fixed in the axial direction and thus meets the broad recitation of “fixed” in the claim.

With respect to claim 11, Kamikawa et al disclose a yoke-and-shaft coupling structure (Figs. 1, 4) comprising a yoke (6) including a shaft coupling portion which has a U-shaped end portion having a U-shaped end face (16-18) and a shaft (1) having a longitudinal axis, a first part of the shaft (1) being positioned in the shaft coupling portion and a second part of the shaft projecting from the yoke (6) through the U-shaped end face (16-18). The shaft coupling portion includes a fixed projecting portion (23, 25) for positioning the shaft (1) in both directions along the axis of the shaft (1). Further, the shaft (1) includes a groove portion (2) to which the projecting portion is to be inserted, the groove portion (2) cooperating with the fixed projecting portion (23,25) to both limit axial movement of the shaft (1) into the yoke (6) and to prevent the shaft from being removed from the yoke (6) by an axial force.

With respect to claim 12, Kamikawa et al disclose that the shaft (1) is shiftable between first and second spaced positions relative to the yoke as limited by the two axially disposed side walls of the groove portion (2).

With respect to claims 13, 14, 17, and 18, it should be noted that these claims depend from claim 1 and thus include all of the limitations of claim 1. The rejection of claim 1 is predicated on the shaft coupling portion possessing the first option, i.e., a fixed projecting portion. Accordingly, further defining the second option when the first option is selected is of little consequence since claim 13 does not preclude the first option from continuing to be selected.

With respect to claim 15, it should be noted that this claim depends from claim 10 and thus include all of the limitations of claim 10. The rejection of claim 10 is predicated on the shaft coupling portion possessing the first option, i.e., a fixed projecting portion. Accordingly, further defining the second option when the first option is selected is of little consequence since claim 15 does not preclude the first option from continuing to be selected.

With respect to claim 16, Kamikawa et al disclose (Figs. 1, 4) that the fixed projecting portion (23, 25) cooperating with the groove portion (2) is capable of permitting the shaft (1) to be removed from the yoke (6) by a force perpendicular to the axis of the shaft (1).

Response to Arguments

Applicant's arguments filed 6/6/2008 have been fully considered but they are not persuasive.

With respect to claims 1, 10, and 11, Applicants argue that the recessed and groove portions radially extend from the end of the U-shaped opening portion with an approximately constant width. The width of the recessed or the groove portion in the axial direction is substantially constant, and that the recessed portion or the groove portion is perpendicular to the axial direction. Further, Applicants argue that the width of the groove 10 of Kamikawa is tapered from top to the bottom. Thus, the width of the groove 10 in axial direction is not substantially constant and groove is not perpendicular to the axial direction. Furthermore, the projection 13 of Kamikawa does not extend perpendicularly to the axial direction. Kamikawa II fails to cure the deficiencies of Kamikawa I. This is not persuasive.

Kamikawa et al (JP '823) clearly show that the recessed portion extends inwardly from the outer surface of the shaft coupling portion, e.g., see Fig. 4. Merely because the recessed portion has a non-symmetrical shape does not mean that it does not extend perpendicular to the axial direction. The depth of the recessed portion clearly extends perpendicular to the axial direction.

Contrary to applicant's allegation, claim 13 fails to avoid Kamikawa et al because Kamikawa et al clearly has a recessed portion that extends perpendicular to the axial direction and thus inherently has a centerline that is also perpendicular to the axial direction.

It appears that applicant is seeking to rely upon the specification to impart to the claims limitations otherwise not found therein. This reliance is ineffective to distinguish the invention as claimed from the prior art as applied.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nahid Amiri whose telephone number is (571) 272-8113. The examiner can normally be reached on 8:30-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nahid Amiri
Examiner
Art Unit 3679
October 14, 2008

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679